



PATENT
Attorney Docket No. 24584

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

VAN DUIJN et al.

Examiner: J. Goldberg

Serial No.: 09/973,180

Art Unit: 1634

Filed: October 10, 2001

For: **DIAGNOSTICS AND THERAPEUTICS FOR AUTOSOMAL DOMINANT
HEMOCHROMATOSIS**

Appendix A

Please amend the following new claims.

30. (New) A method for diagnosing a patient as having an increased risk of developing HH disease, comprising:

providing the isolated DNA sequence of claim 1 from the individual; and

assessing the isolated DNA sequence for the presence or absence of a base mutation at position 734 (A734C) of the SLC11A3 gene, wherein the absence of the base mutation indicates the absence of a HH gene mutation in the genome of the individual and the presence of the base mutation indicates the presence of the HH gene mutation and an increased risk of developing HH disease in the genome of the individual being diagnosed.

31. (New) The method of claim 30, wherein the assessing

step is performed by a process which comprises subjecting the isolated DNA sequence to amplification using oligonucleotide primers flanking the base-pair mutation.

32. (New) The method of claim 31, wherein the assessing step further comprises an oligonucleotide ligation assay.

33. (New) An isolated polypeptide comprising the amino acid sequence as shown in SEQ ID No. 3, made using the isolated DNA sequence of SEQ ID No. 1 as claimed in claim 1, in which the amino acid residue of position 734 (A734C) in exon 5 is changed from asparagine to histidine.

34. (New) The isolated polypeptide of claim 33, which interacts with Hephaestin.

35. (New) The isolated polypeptide of claim 33, which is membrane-associated.

36. (New) The isolated polypeptide of claim 33, which is fused with a heterologous polypeptide.

37. (New) The isolated polypeptide of claim 33, which is a naturally occurring polypeptide.

38. (New) A pharmaceutical composition comprising the isolated polypeptide of claim 33.